HARVARD UNIVERSITY
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12 Oxford Street, Cambridge, MA 02138, USA

March 27, 2003

Richard H. Karney, P.E., Manager
ENERGY STAR Program
Building Technologies Program
Department of Energy
Washington, DC 20585

Dear Mr. Karney,

I strongly support the 4-zone proposal because it clearly saves more energy than the 3-zone one. I believe that the supposed peak-shaving advantage of the 3-zone plan would not materialize in practice, because the use of active shading is more widespread than assumed by DOE. The calculated[1] tiny (0.02%) advantage of low SHGC windows in "peak shaving" of the air conditioning load is actually non-existent when occupant adjustments are considered; DOE should not choose a less energy efficient window because its low SHGC supposedly leads to lower peak electricity demand. That extra peak shaving will not materialize. The use of appropriate active shading can easily compensate for differences in the shading provided by different glazings, resulting in equivalent amounts of peak shaving in the two proposals. The goal of the ENERGY STAR program is to encourage reduced energy use, and the 4-zone proposal does a better job of that than the 3-zone proposal.

Sincerely,

Roy G. Gordon
Cabot Professor

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[1] E. Barbour and D. Arasteh, An Evaluation of Alternative Qualifying Criteria for Energy Star Windows, Office of Building Technology, State and Community Programs, U.S. Department of Energy, May 8, 2002, Table 5, p. 19.